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THE ENTOMOLOGICAL SOCIETY OF LONDON

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TRANSACTIONS AND PROCEEDINGS OF THE SOCIETY.

Some of the early volumes of the Society's Transactions are out of print, but those which are in stock can be obtained at reduced prices. Any single volume of the present series, 1868–1887, is sold at 10*s.* to Fellows. The volumes for 1868–1890, in sets of not less than five, as well as the five of the Third Series (1862–1867), can be obtained by Fellows at greatly reduced prices on application to the Librarian. The following is a price list of recently published parts of the TRANSACTIONS—

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The 1893 CATALOGUE OF THE LIBRARY, with Supplement to 1900, is published at 10*s.*; to Fellows, 7*s.* The Supplement only, 4*s.* 6*d.*; to Fellows, 3*s.*

Butterfly (*Pyrameis cardui*) in caves in England, and asked if any member knew of the caves in question or knew of any other definite record of the hibernation of this butterfly.

Mr. FLETCHER states that when a boy he used to visit some caves at Upnor on the River Medway a few miles from Rochester in November and December and search them with candles. "In small pockets along the passages hibernating specimens could always be found of the Peacock Butterfly (*Vanessa io*) and the Small Tortoiseshell (*V. urticae*). . . . Occasionally in these forays we were lucky enough to find a few Painted Ladies. . . . The Peacocks and Small Tortoiseshells were easily seen, owing to their dark colour, but the beautifully mottled undersides of the Painted Ladies made them rather hard to distinguish in the flickering candle-light."

Considerable discussion took place on the hibernation of these and allied species of butterflies in which Comm. WALKER, Mr. BETHUNE-BAKER, Mr. SHELDON, Dr. ELTRINGHAM, Mr. BAINBRIGGE FLETCHER and others took part.

Wednesday, May 5th, 1926.

No Meeting was held owing to the General Strike.

Wednesday, June 2nd, 1926.

Professor E. B. POULTON, F.R.S., President, in the Chair.

Announcement of Trustee.

The Chairman announced that Mr. R. W. LLOYD had been appointed a Trustee of the Society in place of the late Mr. W. BATESON.

Special Life Fellows.

The following Fellows, having been proposed by the Council, were elected Special Life Fellows :—Professor R. NEWSTEAD, F.R.S., and Mr. F. W. FROHAWK.

Election of Fellow.

The following was elected a Fellow of the Society :—C. W. FFORDE WYATT, 14, Cavendish Square, London, W. 1.

Exhibits.

AN INSTRUMENT FOR RECORDING RADIANT HEAT.—Mr. P. A. BUXTON remarked that there were seasons in the floral and faunal life of Samoa. It was not easy to explain these in terms of temperature, humidity or rainfall. It was possible that they were in part due to seasonal changes in the rate of solar radiation, the sun at noon being vertical in October and February and more near the zenith in summer than winter.

A new instrument (The Radiation Integrator in Vacuo) was shown, with which

these seasonal changes had been studied for a year. It had given results consistent with the theoretical expectation and was easy to use; it had been found possible to standardise it against a pyrheliometer, under certain, but not all, conditions.

The type of *Eumesia semiargentea*, Feld.—Dr. K. Jordan in exhibiting the ♂ type of *Eumesia semiargentea*, Feld., said that the genus *Eumesia* was made by Felder the type of the family Eumesiidae, which, it was alleged, formed a connecting link between the Satyridae and Hesperiidae. He pointed out, however, that the characters upon which Felder based his diagnosis were false. The head, which showed the most marked Satyrid features, was in fact that of a Satyrid butterfly, probably of the genus *Euptychia*, which had been stuck on to the insect and did not belong to it; the only other specimen known to him was in the Natural History Museum and was still in possession of its own head, which was obviously that of an Hesperid. The additional vein in the fore-wing to which Felder drew attention was also shown to be an abnormality, and there was no doubt that *Eumesia* belongs to the Hesperiidae.

Dr. Jordan further demonstrated with the aid of a lantern slide differences in the methods of attachment of the wings and patagia which separate the Hesperiidae from the Rhopalocera and link them very closely with the Heterocera.

An aquatic Lampyrid larva from S. Celebes.—Mr. K. G. Blair said that the larva exhibited, which is luminous in life, was collected by Dr. Malcolm A. Smith at Djikoro, Bonthain, S. Celebes, in February 1925. Luminous points were observed at night on the stones at the bottom of a mountain stream at about 4,000 ft. elevation, the water being about 2 feet deep. The larvae are provided with a long slender sac-like gill on each side of the first eight abdominal segments, while the terminal protrusible group of filaments usual in Lampyrid larvae is modified to form a clinging organ. A brief comparison was made with the accounts of two previously known aquatic larvae of this family, both discovered by Dr. N. Annandale, one of which was not observed to have any special respiratory apparatus, while the other had a terminal respiratory cup opening to the atmosphere. The larva belonged to some genus allied to *Luciola*, perhaps to *Pyrophanes*, E. Oliv.

Mimicry in Coleoptera.—Mr. G. J. Arrow showed some cases of mimetic association in beetles and made the following remarks:—

"The first case was brought to my notice by Dr. Walther Horn, of Berlin, who, rather curiously, is not convinced of its mimetic significance. In a collection of insects from New Guinea he found a bottle containing about 3,000 specimens of *Pantorhytes quadripustulatus*, amongst which he detected half a dozen specimens, which, although apparently the same, he recognised as different by the long slender rostrum concealed beneath the body. Both beetles are black and decorated with four bright orange spots. *P. 4-pustulatus* belongs to a group of short-snouted weevils which are excessively hard, turning the point of any ordinary pin. They can have very little attraction as food. The relatively rare species, *Autillia horridipes*, is a soft-bodied insect, with wings and separate elytra (*P. 4-pustulatus* is wingless and has the elytra united). The most remarkable difference between the two is in the four orange spots which, although they appear to be identical, are

of an entirely different nature. Those of *P. 4-pustulatus* are little shining coloured elevations, but those of *A. horridipes* are round patches of silky hairs, the colour of which is no doubt due wholly or partly to refracted light. It seems a natural conclusion that, in a crowd of 3,000 inedible insects, half a dozen specimens of the mimic would find a considerable degree of safety.

" The second case is a series of associated species representing two different groups of dung-beetles from Africa. The models belong to the genus *Gymnopleurus*, rather familiar from the habit of rolling their balls of food-material along the ground in Southern Europe and many other countries, and having very slender hind legs for that purpose. During this occupation they expose themselves recklessly and, many of them being very conspicuously coloured, they would almost inevitably be exterminated if completely palatable. Dr. Guy Marshall tested one species by offering it to baboons, which refused it.

" In Tanganyika occurs a small shining *Gymnopleurus* (*G. krugeri*), with a small white spot on each side. In *Gymnopleurus* the elytra are cut away behind the shoulders, exposing the abdomen at that point, and the white spot consists of a patch of hairs on the exposed part of the abdomen. In the same region occurs an *Onthophagus* (*O. gerstaeckeri*) of the same size, shining black, with a patch of white hairs in the same position; but these hairs are upon the elytra, the abdomen not being exposed at that point.

" In Abyssinia occurs another *Gymnopleurus* (*G. virens*) of a beautiful golden colour, with a similar patch of white hairs on each side, and in company with it has been taken an *Onthophagus* (*O. kachowskyi*) of the same size and colour and again with a patch of white hairs occupying the elytra but imitating those on the abdomen of the *Gymnopleurus*.

" In Sierra Leone occurs a larger *Gymnopleurus* (*G. nitens*) with a dull bluish exterior and with it has been taken an *Onthophagus* (*O. auratus*) of the same size, colour and texture.

" In the Sudan is found a small *Gymnopleurus* (*G. thoracicus*) with fiery crimson head and thorax and blue elytra, and with it is an *Onthophagus* (*O. princeps*) of exactly the same striking coloration and appearance.

" Finally in Rhodesia, together with the blue-green form of *G. virens* are found species of *Onthophagus* belonging to two different groups (*O. smaragdinus* and *O. rangifer*), both deceptively like it.

" The legs of *Gymnopleurus* are very slender and those of *Onthophagus* short and stout, and their movements are necessarily quite different, but it is when engaged in collecting or feeding upon their food-material that they associate together, and the difference would then be hardly apparent."

A new species of *Zygaena* from the south of Spain.—Mr. G. T. Bethune-Baker said: " The species which I have named *Zygaena chlorinda* * after Signora Querci is allied to the *astragali-lonicerae* group—at first sight I thought it was *Z. meliloti*, but more heavily scaled; an examination of the genitalia proved, however, that it was a new species. It was taken in company with *Z. trifolii*, but that species is much larger than *chlorinda*, whilst it is much more heavily scaled than is *meliloti*, and this latter has not yet been recorded from Spain.

* [*Ent. Rec.*, xxxviii, p. 84.—Ed.]

The Witch-hazel (*Hamamelis*)-like smell of *Heliconius h. hydarus*, Hew., and *H. h. columbinus*, Staud.—Miss Cynthia Longfield communicated the following note :—

" At the meeting of the Entomological Society of London on June 3rd, 1925 (*Proc. Ent. Soc.*, p. xxxvii), Professor Poulton referred to a discussion on the scent-glands of *Heliconius erato hydarus*, then taking place between certain entomologists. The question dealt with an odour resembling carbylamine, which was said to be apparent immediately after the insect was captured, prior to the detection of a second odour, resembling witch-hazel (*Hamamelis virginica*) which succeeded it.

" I met with this butterfly during the Expedition of the *St. George* in 1925, taking it at Trinidad, West Indies; Panama Canal Zone; and the islands of Taboga, Coïba and Isla del Rey (Pearl Islands) of the Panama Republic. The odour of witch-hazel was strongly apparent while the butterfly was still in the net. The odour was a matter of careful comment on a number of occasions, and was identified on the first occasion as being the same as that from a bottle of Pond's Extract of *Hamamelis* which was on the *St. George*. The odour was often so strong that it was noticeable from a distance of 2 or 3 feet when the cyanide-bottle containing a butterfly was opened on returning to the ship.

" Dr. G. B. Longstaff, in *Butterfly-hunting in Many Lands* (London, 1912), records the odour of witch-hazel; and thinking that the full facts were known, we unfortunately kept no record of sexes or other details.

" Mr. C. L. Collenette agrees with me that the odour was exactly that of witch-hazel, and that no other odour was noticed."

The President said that it was of much interest that the odour had been observed, he believed for the first time, in *H. hydarus columbinus*, all previous records being concerned with *H. hydarus hydarus* (*erato hydarus*). An inspection of the collections made on the expedition showed that the former race had been met with commonly, the latter rarely, so that Miss Longfield's statement that the scent was observed " on a number of occasions " points to the conclusion that *h. columbinus* certainly emits the odour.

Zygaenidae attracted by the female of *Lasiocampa quercus*, L.—The President communicated the following observations made by Mr. E. B. Ford :—

" Last year I was interested to find that numbers of *Zygaena filipendulae*, L., were attracted by a virgin female *Lasiocampa quercus* at Cothill in Berkshire. They crawled over her box and returned after being disturbed. Later in the day I took the female to an adjacent, and more numerous, colony of *Z. trifolii*, Esp. To this species she proved wholly unattractive. A similar occurrence has been recorded at least once before (*Entom.*, vol. 55, 1922, p. 280).

" There can be little doubt that the female *L. quercus* produces the same scent as *Z. filipendulae*. Within such a group as the Lasiocampidae the attractive scent is specific in character, as is proved by the fact that related species attract only their own males. In the Zygaenidae scent-production must, almost necessarily, have been acquired independently. It would not be surprising, therefore, to find a case in which it becomes by chance identical, for the number of suitable organic compounds is probably limited. Though a single negative observation can not be

regarded as final, the behaviour of *Z. trifolii* indicates that the scent is different in this species, as was to be expected.

" Professor Poulton has kindly drawn my attention to some records which may have a bearing on this question. Dr. Carpenter found a male of the African *Acraea terpsichore*, L., attempting to pair with a male Syntomid, *Epitoxis albicincta*, Hmpsn. (*Proc. Ent. Soc. Lond.*, 1913, pp. xciii, xciv). Mr. Lamborn has recorded observations analogous to the above in the conspicuousness which would be emphasised by unusual epigamic instincts : four Lycid beetles clinging to a female of the same species (*ibid.*, 1913, p. lxxxiv), and three male *Planema alcinoe*, Feld., clinging to a female *in coitû* with a fourth male (*ibid.*, 1911, p. xcv). Professor Poulton suggested that inasmuch as the Acraeinae and the Lycidae were both distasteful groups with aposematic colours, it was reasonable to suppose that the increased conspicuousness produced by such masses of individuals was less harmful to them than it would be to palatable species.

" It is interesting to note that, with the exception of *L. quercus*, specially protected species are associated in each of the present examples."

The predominance of mimetic associations among the butterflies of Uganda.—The President said that he had recently received from his kind friend Major C. A. Wiggins, C.M.G., a small collection of 82 butterflies captured by a native in forest country near Entebbe, in September 1921. The precise locality was probably a patch of forest near the Lake (also near Sebogwawo's) about 3–4 miles N.E. of Entebbe and at an elevation of about 3,800 ft. It was possible, however, that the specimens were taken in a forest N. of Kitabi Hill (Bunono), about 3 miles N.N.E. of Entebbe at the same elevation as the first-named locality. Major Wiggins had informed him that the native was quite inexperienced and that the series includes all the butterflies taken by him. It is therefore an indiscriminately collected assemblage, providing, in all probability, fair representatives of the large and moderate-sized species predominant in the forests of the locality during September 1921.

When the collection is looked at as a whole it is seen that probably every specimen enters as a model or a mimic into one of the many Uganda associations. The members of the best-represented associations are shown in the table on p. 22. The few remaining species are as follows :—

1 ♂ *Amauris damocles damoclides*, Stgr.—(15 September, 1921). Entering into association with other species of *Amauris* and acting as a model for forms of *Hypolimnas dubia*, Pal. de Beauv., and *dinarcha*, Hew.

2 ♂ *Tirumala mercedonia*, Karsch—(21 and 29 September). The model of *Papilio rex mimeticus*, Rothsch.

2 ♀ *Planema consanguinea albicolor*, Karsch = *arenaria*, E.M.Sh.—(20 and 28 September). Probably associated with the paler forms of *Planema epaea paragea*, Gr.-Sm., and its Papilionine mimic—*P. cynorta peculiaris*, Neave.

1 ♂ *Acraea caecilia*, F.—(30 September). Associated with other Acraeas of moderate size and with similar pattern.

1 ♀ *Acraea pentapolis*, Ward—(15 September). Probably entering as one of the largest species into an association of transparent-winged Acraeas of very variable size.

Associations of butterflies with Acraeine or Danaine central models.	Associations with Acraeine Central Models.															Associations with Danaine Central Models.								
	Association with pattern of ♂ and ♀ *Planema poggei* and ♂ *P. macarista* (only the ♀ of this model was taken).					Association with pattern of ♀ *Planema macarista* and ♀ *P. alcinoe camerunica*.					The materials for an association exist: (Carpenter, *Trans. Ent. Soc.*, 1923, pp. 487, 488).		Association with pattern of ♂ and ♀ *Planema tellus eumelis*.					Association with pattern of *Danaida chrysippus* and its form *dorippus*, Kl. (the latter not taken).					Association with pattern of the Danaines *Amauris oscarus* and *echeria* (the latter not taken).		
Species captured in each association by native, near Entebbe in 1921.	*Planema poggei nekoni*, Gr.-Sm., ♂ & ♀.	*Acraea alciope*, Hew., ♀ f.m. *auricillis*, Gr.-Sm.	*Acraea alciope*, Hew., non-mimetic ♂.	*Pseudacraea dolomena albostrigata*, Lathy, f.m. *dolabella*, Hall, ♂ & ♀.		*Planema macarista*, E.M.Sh., ♀.	*Planema alcinoe camerunica*, Auriv., ♀.	*Planema aganice montana*, Butl., ♀.	*Acraea jodutta jodutta*, F., ♀ f.m. and non-mimetic ♂.	*Pseudacraea eurytus hobleyi*, Neave, ♀ f.m. *tirikensis*, Neave.	*Planema aganice montana*, Butl., ♂.	*Planema alcinoe camerunica*, Auriv., ♂.	*Planema tellus eumelis*, Jord., ♂ & ♀.	*Acraea j. jodutta*, F., ♀ f.m. *dorotheae*, E.M.Sh.	*Acraea althoffi althoffi*, Dew., ♀ f.m. *telloides*, Eltr.	*Pseudacraea eurytus hobleyi*, Neave, ♂ & ♀ f.m. *terra*, Neave.	*Danaida chrysippus chrysippus*, L., type f. ♂ & ♀.	*D. c. chrysippus*, f. *alcippus*, Cr., ♂ & ♀.	*Acraea encedon encedon*, L., type f. ♂ & ♀.	*A. e. encedon*, f. *lycia*, F., ♂ & ♀.	*Hypolimnas misippus*, L., ♀ f.m. *inaria*, Cr.	*Amauris oscarus*, Thurau, ♂ & ♀.	*Hypolimnas dinarcha*, Hew., ♂ & ♀.	*Papilio zoroastres homeyeri*, Plötz, ♀, and non-mimetic ♂.
September 10																			1						
,, 13										1															
,, 14			2												1		3			1					
,, 15		1	1		1	1	2	1♀		3			1				1	2							
,, 16												1						1†			2				
,, 19	1							1♂		3														1♂	
,, 20		1								3															
,, 21		1	1		1					1	1		1												
,, 22		2	1					1♂ 1♀*				1													
,, 23		1	2	1♂									2												
,, 24			1										1												
,, 25			1													1								1♀	
,, 26		2							1	1							1				1				
,, 27			1																						
,, 28		2																					1		
,, 29			1																						
,, 30		1																							

* This *jodutta* is the ♀ f. *interjecta*, Eltr., with white subapical bar to F.W., and ochreous H.W. bar extending on to F.W., unusually narrow in this example. A mimic of the ♀ Planemas, although not so good a one as the ♀ f. *jodutta*.

† This specimen is transitional towards the f. *daira*, Godm. and Salv., a co-mimic with the *inaria* ♀ f. of *H. misippus*, both resembling the *dorippus* f. of *chrysippus*.

1 ♀ *Papilio ridleyanus*, White—(14 September). A beautiful mimic of the large red-and-black Acraeas—*egina*, Cr., *zetes*, L., etc.

1 ♂ *Hypolimnas monteironis*, Druce—(23 September). The female an outlying member of the powerful *Amauris niavius*, L.-centred association.

1 ♀ *Charaxes lucretius*, Cram.—(15 September). Associated with *Ch. cynthia* Butl., and, with the female of this species, mimicked on the W. Coast by the female of *Charaxes anticlea*, Drury.

In the associations represented in the table the non-mimetic males are included as bearing on the relative abundance of the species. The *lycia*, F., form of *Acraea encedon*, L., is included because of its resemblance in pattern although not in colour to *D. chrysippus*. It will be observed that the *inaria*, Cr., ♀ of *H. misippus*, L., was taken, although no example of its model (the form *dorippus*, Kl., of *D. chrysippus*) was present in the collection.

The series of *Planema aganice montana* (11 ♂, 2 ♀) indicates a great, although perhaps temporary, increase in the numbers of the species in the Entebbe district. Major Wiggins' large collections, made during many years in the same area, only contain 1 ♂ (1909) and 6 ♀ (1910), as Dr. G. D. H. Carpenter has recorded in *Trans. Ent. Soc. Lond.*, 1923, p. 485.

Another noteworthy feature is the very high proportion (more than ¼ of the whole collection) of *Acraea alciope* (11 ♂, 11 ♀) with its *aurivillii* ♀ f., mimicking *Planema poggei nelsoni* and the male of *P. macarista*.

In the predominance of mimetic associations there is a striking resemblance between this little collection from Uganda and the series, taken 28 August, 1903, on the road from the Potaro River to the gold-mines, in British Guiana (*Proc. Ent. Soc Lond.*, 1903, pp. liv–lvi).

A remarkable larva of *Abraxas grossulariata*, L.—The President exhibited a living larva, about half-grown, of *A. grossulariata*, one of three nearly similar varieties which had appeared in one of his families. The conspicuous black markings of the body were entirely wanting, rendering the caterpillar, with its faintly bluish, white ground-colour, reddish-orange lateral stripe and black head, extremely different in appearance from the normal form. The development and depth of tint of the lateral stripe varied greatly, but it was recognisable in all three caterpillars. Dr. Eltringham had very kindly made a coloured drawing of two of the larvae.*

Lord Rothschild said that he possessed a drawing of a *grossulariata* larva which was probably similar to the variety exhibited to the meeting. It had been bred by the Rev. G. H. Raynor.

Insects collected from a sickly-looking banana-leaf, on Bukassa Isle, N.W. Victoria Nyanza.—The President exhibited the following insects taken

* 28 July, 1926. One of the larvæ died and has been preserved in spirit. The two others remained sleeved on *Prunus pissardii* on July 10 when I left England. When next examined (July 24) one larva was found dead and shrivelled, while the other had become a fine and normally coloured female pupa.—E.B.P.

7 Sept. 1926. A moth of normal appearance emerged 4 Aug., paired with a captured male and laid numerous eggs.—E.B.P.

on 5 May, 1925, by his friend Dr. G. D. H. Carpenter, who had described the circumstances as follows :—

" One evening (May 4, 1925) in a banana plantation on Bukassa I. my attention was directed to a somewhat unhealthy-looking banana-leaf of a young plant. The leaf was about 3 feet from the ground and in a horizontal position. My attention was attracted because of some fine large Ichneumons and many other smaller species which were eagerly running to and fro over the flat surface. I visited this leaf again in the morning sun and collected samples of the insects on it—Hymenoptera (represented by small Fossors, Ichneumons, and Sawflies), and Diptera of various small species.

" Possibly the association of all these may be of sufficient interest to be worth the work of identification. I could see nothing on the leaf that might be the attraction. It was not infested by COCCIDAE or APHIDAE, and, so far as I could see, had no sticky substance on it. A native coffee-bush somewhat overshadowed it, though not directly over it, and there may have been scale-insects on that."

The Hymenoptera, exclusive of the TENTHREDINIDAE, had been kindly arranged in their groups by Dr. R. C. L. Perkins, D.Sc., F.R.S., as follows :—

A. PSAMMOCHARIDAE (POMPILIDAE).

Agenia sp., ♀.

B. ICHNEUMONIDAE.

Subfam. CRYPTINAE.—7 or 8 spp. (in 12 examples). Also 1 doubtful Cryptine (not possible to examine properly).

Subfam. ICHNEUMONINAE.—2 spp. (single specimens of each).

Subfam. TRYPHONINAE.—1 sp. (1 specimen).

C. BRACONIDAE.

Apanteles.—2 spp. (single examples).

In addition to the above, the Hymenoptera included 5 TENTHREDINIDAE, which had been kindly identified by the Rev. F. D. Morice, as follows :—

" I think I have succeeded in running down the African Sawflies to *Dulophanes antennatus,* Enslin, the ♀ of which is described on pp. 108, 109 of *Mitteilungen aus dem Zoologischen Museum in Berlin* (7 Band 1 Heft), 1913. The ♂ is not described in that paper; whether it has been so since I do not know.

" *Dulophanes,* Knw.,* is the only Hoplocampid genus as yet recorded from Africa (*teste* Enslin), and your insects are certainly Hoplocampids. The neuration of the wings quite agrees with Enslin's figures and with that of no other Sawflies known to me."

The Diptera included 2 examples of a species of *Calobata,* 8 examples (5 ♂, 3 ♀) of a species belonging to a genus allied to *Pachygaster* (STRATIOMYIDAE), and 1 example of *Trirhithrum* sp. (TRYPETIDAE)—kindly determined by Major E. E. Austen, D.S.O.; also single examples of the genera *Sciara* and *Leia* (MYCETOPHILIDAE), and doubtfully of *Aphiochaeta* (PHORIDAE), kindly determined by Mr. F. W. Edwards.

The condition of many of the specimens would have prevented a closer identification, while many others belong to especially difficult groups.

A CONOPID FLY CARRYING THE POLLINIA OF AN ORCHID.—The PRESIDENT exhibited, a specimen of *Physocephala rufipes,* F. (CONOPIDAE), with five pollinia of an

* Described by Konow in *Zeitsch. f. syst. Hymenopt. und Dipt.,* vii, Jahrg. 1907, p. 132.

Orchid (probably *O. maculata*) attached to the lower part of its face. A sixth pollinium had been removed for examination. The fly had been captured at Tubney, near Oxford, 24 June, 1925, by Mr. J. Collins. The probable determination of the pollinia had been kindly communicated by Dr. A. B. Rendle, F.R.S.

An additional pupa of *Hyperechia xylocopiformis*, Walk. (Asilidae) from the block of wood sent by Dr. Kunhi Kannan from Madras.—In sawing off a piece of the block of wood referred to in *Proc. Ent. Soc. Lond.*, 1926, p. 1, in order to reduce its size for exhibition purposes, the President found an additional dead pupa of *Hyperechia* embedded in it. The pupa occupied a chamber at the end of a tunnel coming off from one of the much larger Xylocopid tunnels, from which it was barricaded by a strong partition wall.

The Pupa of *Ocypus olens*.—Mr. H. Main exhibited a subterrarium containing a pupa of *Ocypus olens* in its natural resting position in the vertical cell prepared by the larva. He pointed out that stiff bristles projecting from the top of the head steadied the pupa, which stood upright on its tail.

Dr. R. J. Tillyard, F.R.S., stated that he had some highly interesting fossil insects which he would be happy to demonstrate, by arrangement, to anyone interested, and he undertook at the invitation of the President to give a lecture on this subject at one of the October meetings.

Papers.

The following papers were read :—

1. " On the British species of the genus *Lucilia*," by Mr. O. W. Richards, B.A.
2. " Teratological Coleoptera," by Dr. E. A. Cockayne, M.A.
3. " Abdominal glands in Heliconiid Butterflies," by Dr. H. Eltringham, M.A., D.Sc.
4. " On Microlepidoptera from the Galapagos Islands and Rapa," by E. Meyrick, B.A., F.R.S.
5. " On the structure of an organ in the hind-wing of *Myrmeleon nostras*," by Dr. H. Eltringham, M.A., D.Sc.
6. " On some Australian Coleoptera collected by Charles Darwin," by Mr. A. M. Lea.
7. " A study of Butterfly Immigration in S. India and Ceylon," by Mr. C. B. Williams, M.A.
8. " A new subfamily of Bythoscopidae (Homoptera, Jassoidea)," by Mr. W. E. China.
9. " The metamorphosis of certain Nymphalid butterflies of the genera *Charaxes*, *Euxanthe*, and *Palla*," by Dr. V. G. L. van Someren, F.L.S., M.B.O.U., etc., and Dr. R. A. L. van Someren, M.D., D.P.H., etc.
10. " The Biology of British Crabronidae," by Messrs. A. H. Hamm, A.L.S., and O. W. Richards, B.A.
11. " Two new African Dragonflies," by Lt.-Col. F. C. Fraser, I.M.S.
12. " On the Life-history of *Caligo illioneus illioneus*," by Mr. L. D. Cleare.
13. " On a new organ in the abdomen of *Eryphanis polyxena*," by Dr. H. Eltringham, M.A., D.Sc.

Wednesday, October 6th, 1926.

Professor E. B. Poulton, F.R.S., President, in the Chair.

Obituary.

The President announced the death of Dr. J. C. Moulton, Mr. George Lewis, and the Rev. F. D. Morice, a past President of the Society, and a unanimous vote of condolence with his family was passed.

Exhibits.

A clearwing moth new to Britain.—Mr. H. J. Turner, on behalf of Mr. W. Fassnidge, a Fellow of the Society, exhibited a species of clearwing moth, *Synanthedon flaviventris*, Stdgr., not hitherto discovered in the British Islands. The swollen stems, galls, were being sought for the larvae of the Tortricid, *Grapholitha servillana*, Dup., in the twigs and smaller stems of sallow and other willows, and larger galls were met with which suggested those of the Coleopteron *Saperda populnea*, which are usually found in aspen. The larva in a gall cut open was found to be Lepidopterous, and subsequently from the other stems collected Mr. Fassnidge bred two of those exhibited and the exhibitor bred the third. The cut-open mine was also exhibited showing the pupae-case *in situ* at emergence. The pupation takes place head downwards. The galls made by the larvae of *Grapholitha servillana* were exhibited for comparison. [See *Entomologist's Record*, xxxviii (n. s.), p. 113, plt. 3 (1926).]

Melanic aberration of *Pieris napi*.—Mr. N. D. Riley exhibited an almost black male specimen of *Pieris napi*, L., taken at La Villette, St. Martins, Guernsey, on August 30th, 1926, by G. A. and P. Brett. The wings were dark smoky grey all over, slightly darker towards the base and on the underside. The head, thorax and abdomen, and the antennae, except the tips, were also black. On the undersides of the hind-wings the characteristic dark markings of *P. napi* were just traceable; the upper surfaces, particularly of the fore-wings, had a slightly blotched appearance. The suggestion that this aberration was comparable with var. *bryoniae* was considered erroneous because, in the first place, the darkening was of a different nature, and secondly, it is only the female *bryoniae* which is dark.

Dr. Cockayne stated that he believed a very similar specimen had been taken a few years ago by Mr. B. S. Harwood in his garden at Essex; and Lord Rothschild mentioned that he had an exactly similar aberration of the closely related *Pieris brassicae*. No other records of similar specimens could be found.

Pupation of *Zegris eupheme*.—Mr. N. D. Riley also read the following extracts from a letter from Lt.-Col. H. D. Peile, a Fellow of the Society, asking for information upon the method of pupation in the Pierid butterfly *Zegris eupheme*. "In Mesopotamia in 1920, I found a larva, on a yellow-flowered crucifer, that I believe to have been that of *Zegris eupheme*, a species which was on the wing there at the time, as it was, I consider, similar to the preserved larva of *Z. eupheme* in the Brit. Mus. (N.H.). It was rather larger than larvae of *Euchloë belemia* and *E. ausonia*, and differed also in having some yellow in it, as did also the pupa at first. This larva pupated like any normal *Euchloë* larva, forming the body-girdle and anal pad, without any sign whatever of a cocoon. The pointed 'nose'-like

end of the pupa emerged from the larval skin doubled on itself, as in *Euchloë belemia* and *ausonia* and then straightened out. Unfortunately it died as a pupa; and when, the previous year, I saw *eupheme* about in hundreds and ovipositing on at least two kinds of crucifers (one having yellow and the other mauve flowers), not having any books with me, I was not aware that the species is considered abnormal or that its life-history had not been thoroughly worked out before.

" I should be most interested to hear from anyone who could tell me whether this cocoon-making habit is definitely proved by first-hand evidence, or not. Rambur (*Faune d'Andalusie*) figures as belonging to this species a stout, rather stumpy pupa, attached in the usual Pierid fashion, but completely surrounded by a delicate net-like cocoon. The remarks of all subsequent authors are clearly based upon the figures and statements of Rambur.

" I believe, however, that the larva does not make this supposed cocoon at all, but I was not able to prove or disprove it. I saw *Z. eupheme* flying from the end of February to mid April, and one on 20th May, in Mesopotamia. As the cruciferous plants dry up in June and break off at the roots and are blown and rolled about by the wind, it seems probable that the larvae leave the food-plant and pupate on some more permanent plant."

Ants from Sicily.—Mr. Donisthorpe exhibited three interesting species of ants taken by him in Sicily in the winter of 1926, viz.:—

Bothriomyrmex adriacus subsp. *ionius* var. *sicula*, Emery. Of this ant, only two specimens were known, and these had been taken by Prof. T. de Stefani in Sicily many years ago, the exact locality being unknown. A large colony was discovered under a stone at Taormina on April 22nd, 1926.

Iridomyrmex humilis, Mayr (Argentine Ant). On March 21st, 1926, in a road towards the outskirts of Palermo a number of workers of this introduced species was seen running in small single files on the pavement. They were seen to come out of a garden. This is the first time it has been found in Sicily, and the exhibitor gave details as to its present known distribution, etc.

Strongylognathus destefanii, Emery. Only a single female of this degenerate slave-maker had hitherto ever been found, this having been taken by de Stefani near Palermo 41 years ago. On April 6th, 1926, a solitary deälated ♀ was taken under a stone at Taormina. On April 12th, a strong mixed colony of the *Strongylognathus* and *Tetramorium caespitum* subsp. *ferox* var. *diomedaea*, Emery, was found at Taormina, and another similar mixed colony on the other side of Taormina on April 20th. Neither the subspecies *ferox* nor this variety had been taken in Sicily before. On April 22nd a mixed colony of *Strongylognathus* and *Aphaenogaster testaceo-pilosa* subsp. *semipolita*, Emery, was found! This is very remarkable, as all the known forms of *Strongylognathus* (4 species, 5 subspecies and 2 varieties) have only been found with *Tetramorium* forms as their hosts. The exhibitor gave an account of the habits of the genus.

Colour variation in Lepidopterous Larvae.—Dr. E. A. Cockayne said:-

" In August I was beating for larvae at Gight in E. Aberdeenshire, and came across some very old mountain-ash trees covered with lichens. Larvae of *Opisthograptis luteolata* were abundant. The majority were of the green form with a dark red hump on the 7th segment and sometimes another on the 9th; in addition a few had an interrupted or complete red dorsal stripe on the last four segments.

Sixteen resembling the lichen were obtained and varied from individuals almost entirely grey-green to those almost entirely brown. This form is not figured in Buckler's *Larvae*. Evidently it is allied to the plain brown form, which occurred with it in rather larger numbers and not to the green form. The dark markings in the lichen form are brown and not red. One specimen was pale grey with some green markings, but heat has changed the grey to a light reddish brown. *Odontopera bidentata* was much scarcer. The majority resembled the lichen. Four had a blue-green, six a yellow-green, and three a light reddish-brown ground-colour. Unfortunately heat has destroyed the contrast between the blue and yellow-green. One specimen had greyish-green and black markings, but there was also a good deal of dark brown on it. Two had a dark brown ground-colour mottled with grey-green, especially on the first three and last four segments. Three were dark brown and one blackish brown, but these were beaten from trees with less lichen on them.

"Last year in the New Forest I beat a large number of larvae of *Miselia oxyacanthae* from lichen-covered hawthorn, blackthorn and apple, and most of them resembled the lichen. From trees with little or no lichen on all were plain brown. I have placed in the box a larva of the black form, which has appeared recently in Epping Forest and on Wimbledon Common. Our President showed that in the larva of *Gastropacha quercifolia* a similar change of colour resembling lichen was a direct response to environment, and probably it is brought about in the same way in these species.

"Many larvae have both brown and green forms, and the difference is due to a difference in the pigmentation of the skin in some cases, but not in all. It is so in *Hadena pisi*, both the brown and green forms of which have green blood and green fat. On the other hand, *Eupithecia expallidata* has one form with a white ground-colour and another with green, and in the former the blood is colourless, the fat white, and the skin devoid of green pigment, whereas in the latter the blood and fat are green and the skin is tinted with the same pigment. I show preserved larvae of both forms and fat from both in capillary tubes. The blood and fat in the whitish and bright green forms of *Cosymbia linearia* are green, but in the whitish form there is scarcely any green pigment in the skin. In all the brown forms the blood, fat and skin lack green pigment altogether. Preserved larvae of these are exhibited."

Lycaenids from the Tyrol and France.—Brig.-General B. H. Cooke exhibited :—

(1) A series of 7 male specimens which appeared to be hybrids of *Lycaena* sp. × *L. bellargus*. They are of a brilliant blue on the upperside, of almost precisely the same shade as *L. amandus*, and have a row of conspicuous black dots along the outer margin of the hind-wing. The underside is almost exactly similar to specimens of *L. corydon* taken in the same locality, except that the ground-colour is slightly darker, and that there is more blue scaling at the base of the hind-wings, the scales being of the same colour as the upperside. These 7 specimens were taken on the Seiseralpe above Seis-am-Schlern in the Dolomites between 26th June and 10th July, 1926, on a steep grassy slope at about 5,100 ft., just below the tree line. Specimens of *L. corydon, bellargus, hylas* and *icarus* taken between the same dates and on the same spot were also exhibited. One very small female possesses characteristics of the females of both *bellargus* and *corydon*, and may

belong to the same brood as the 7 males. On 26th June *bellargus* were already "going over," and the first newly emerged specimen of *corydon* was not taken until 9th July. The neighbourhood was fairly thoroughly searched, but no other similar specimens were found, which seems to point to the probability that they were all from eggs laid by one female. The only insects in the British Museum collection which at all resemble these are the specimens of *L. polonus*.

(2) A series of the *Lycaena corydon* group of a spring generation taken at Digne, Nice, Ste Maxime and St. Martin Vésubie. The Digne specimens were all taken in the country on the right bank of the River Bléone, none having been found on the left bank. It is understood that in July *L. corydon* is taken chiefly on the left bank of the river. The Ste. Maxime specimens mostly have an abnormally broad and sharply defined black margin to the upperside of all wings, and an underside with rather blurred markings, and of a much deeper ground-colour than the average *corydon*. The question arises as to whether this spring generation is or is not a species distinct from *L. corydon*, and if so what is the name of the species.

Sex-ratio of *Hypolimnas bolina*, L., in Viti Levu, Fiji.—The President, on behalf of Mr. G. H. E. Hopkins, exhibited a series of specimens of the Fijian race of *H. bolina*, captured on the outskirts of Suva, Fiji, 22-25 December, 1925. The interest of the specimens lies in the fact that while Mr. H. W. Simmonds, collecting intermittently in the same locality over a term of years ending when he left Fiji in February 1925, had found the females always to outnumber the males, in the present series there were 9 males and only 4 females. The females were practically all the specimens of that sex seen by Mr. Hopkins in the three days spent in Suva, while many more males were seen than were captured, so that the disproportion is really much greater than would appear from the specimens, being at least 3 males to 1 female. Mr. Simmonds, on returning to Fiji after about a year's absence, was able to confirm the reversal in the sex-ratio and to point out that it must have occurred in 1925.

Mr. Hubert W. Simmonds communicated the following record of observations on the sex-ratio of the species in Viti Levu and other Pacific islands :—

"In the *Transactions* of the Society for 1923 Prof. Poulton has given an account of a number of families of the butterfly *Hypolimnas bolina*, L., bred by me in Fiji. These included several all-♀ families from parents captured on the island of Viti Levu. From the beginning of my breeding of this butterfly in Viti Levu up to the present time, although 16 or 18 families have been reared, I have not bred a single ♂ from that island. I have also obtained single all-♀ families from the islands of Kadavu (or Kandavu) and Vanua Levu. Families bred from female parents, or specimens reared from scattered larvae, in Taviuni, Ovalau and Vanua Balavu, gave males and females in equal proportions, as also did bred specimens from other Pacific groups that I have visited, viz. Tahiti, Cook and Wallis groups. In this connection I have noticed that in those islands where the males abound, *bolina* is numerous, but relatively scarce where the proportion of males is low. When I first landed in Suva in April 1919 I spent two days collecting round the town and did not see a single specimen, but about July the species became fairly numerous in some old rice-fields at Waidoi near Navua. At that time females were in considerable excess but males were certainly present, and this state of affairs continued until February 1920, when I left for Tahiti. Here I found males apparently

in great excess, but breeding, carried on a little later, proved that the sexes are relatively equal. I then visited the Cook Islands, where also the sexes occurred in equal ratio.

" In August 1920 I returned to Viti Levu and found that *bolina* was still fairly common, with females in excess. After another trip to the Society group I again returned to Suva in April 1921, when I observed that *bolina* was scarcer. I was, however, able to obtain a sufficiency of females to breed from during the following 12 months. Throughout this period females were always apparently in excess, and my Viti Levu families were, as I said before, all female.

" In July 1923 I left for the Solomon Islands and New Guinea, *bolina* remaining very scarce up to the time of my departure. On my return in February 1924, the species seemed to have entirely disappeared and I did not observe a single specimen for some months, after which it reappeared in fair numbers and still yielded all-♀ families, although males were present, even in my own garden.

" In February 1925 I left for the East, returning in February 1926, when I found the butterfly not uncommon and males equally common with females.

" There is a possibility, but I do not think it likely, that the insect actually died out towards the end of 1923, and was reintroduced from one of the adjoining islands where it is always abundant. I do not, however, think this can have been the case, because when it reappeared in 1924 I continued to obtain all-♀ families, which I have not obtained from the adjacent island of Ovalau, and only once from Kadavu and Vanua Levu. So far as I have been able to ascertain parthenogenesis does not occur. I wondered if such a thing as a female dominance were possible, but in that case the extermination of the species on the island would be inevitable, and this does not appear to have happened in the summer 1923–24; for the reappearance of the butterfly with all-♀ families later in 1924 seems to suggest that these were the descendants of the *bolina* which had been there in former years and not a fresh invasion. I am informed that 20 or 30 years ago the butterfly was so abundant on Viti Levu that its pupae were to be observed hanging on the wire fences everywhere. This, however, may have been in an exceptional year which had specially impressed my informant. I have myself once seen the species swarming in this way on Ovalau, where it does not normally exist in such vast numbers, although always far more abundant than on Viti Levu.

" As I am about to return to Fiji I am looking forward to further work on this most interesting species."

The President said that it was of very great interest to be able to determine the period at which males began to appear in a normal ratio in Viti Levu. Mr. G. F. Mathew had recorded the preponderance of females among the bred specimens in 1882–1884 (*Trans. Ent. Soc.*, 1923, p. 651), but the most demonstrative evidence was that furnished by the all-♀ families bred by Mr. Simmonds. Two of these from Viti Levu (1921), one from Kandavu (1921), and one from Vanua Levu (1922), were briefly recorded in *Proc. Ent. Soc.*, 1923, pp. ix–xii, and fully in *Trans. Ent. Soc.*, 1923 (1924), pp. 651–662. In addition to the two first-named families, no less than 157 females and not a single male had been since bred by Mr. Simmonds in ten families from the ova of captured Viti Levu females, as shown in tabular form on p. 31.

Female parents captured near Suva in 1924.	Number of offspring (all-♀).	Months in which offspring emerged from pupa.
Parent A captured 1 March.	1	April 1924.
„ B „ 7 March.	13	April, May 1924.
„ C „ 6 March.	5	April 1924.
„ D* „	27	May 1924.
„ E „ 20 April.	25	May, June 1924.
„ F „	6	July 1924.
„ G „ 9 June.	27	July 1924.
„ J „	11	September 1924.
„ H „ 27 October.	4	November 1924.
„ I „ 5 November.	38	Dec. 1924, Jan. 1925.

The female forms in these families were of great interest and beauty, and it was hoped that they would be fully analysed and recorded in the not distant future.

The most probable interpretation of these remarkable sex-ratios seemed to be along the lines suggested by W. A. Lamborn's researches on *Acraea encedon*, L., in S. Nigeria (*Linn. Soc. Journ.*—Zool., vol. xxxii, p. 391, 1914; also briefly recorded in *Proc. Ent. Soc.*, 1911, pp. liv–lvi). Lamborn's experiments showed the existence of two kinds of female, both requiring fertilisation, but one producing all-female offspring, the other males and females. The first kind had been carried unchanged through three generations, the second through two. These results were unaffected by the male parent; for three males from the same family were mated respectively with two females of the first kind which produced all-female families, and with one female of the second kind (from the same family as the male) which produced a mixed family. These results might be seen at a glance in the genealogical table on p. 401 of the *Linnean Journal* referred to above.†

This sudden change in sex-ratios of the Viti Levu *bolina* suggested an investigation of the utmost interest. The only probable causes seemed to be—(1) Migration from another island with a different sex-ratio; (2) A cyclical change appearing after many generations in the Viti Levu *bolina*. It was much to be hoped that Mr. Simmonds, who had been so successful in breeding the Fiji *bolina*, would also succeed in solving this problem.

Lord Rothschild drew attention to the fact that many years ago the late Mr. Henley Grose-Smith had received a large consignment of *H. bolina* from Fiji, and that the immense preponderance of females had aroused much interest and surprise. There could now be no doubt that the explanation was afforded by the existence at this much earlier date of the conditions recorded by Mr. Simmonds.

* The approximate date of capture of this female, as well as F and J, can be estimated from the times of emergence from the pupae.

† A copy of the paper can also be consulted in the Appendix (Memoir 12) to Vol. X of Hope Reports, in the Library of the Entomological Society.

The Pygmy Falcon capturing butterflies in Kelantan.—The President drew attention to the following observation recorded by Mr. F. F. Laidlaw, M.A., in *Journal 88 of the Malayan Branch of the Royal Asiatic Society*, October, 1923, p. 377 :—" Whilst I was at Kuala Aring in Kelantan in September 1899 I was interested to notice on more than one occasion a small party, 3 or 4 individuals I think, of the Pigmy Falcon (*Microhierax fringillarius*). These birds used to sit on the higher branches of a dead tree which stood in the middle of a small clearing in the forest close to the kampong. Their occupation seemed to consist chiefly in capturing butterflies, and there was constantly a litter of wings on the ground about the foot of the tree. Amongst them were the wings of *Papilio delesserti* [Guér.], an insect I did not at the time have means of identifying. It was, however, common at Kuala Aring, in fact abundant; and though I am writing from memory more than twenty years after making the observation I am quite sure of the fact."

Mr. Laidlaw's observation supplied interesting confirmation of the notes recorded by the late Col. C. T. Bingham in *Essays on Evolution*, Poulton, 1908, pp. 289–91. Col. Bingham also found that Papilios formed a large proportion of the butterflies captured by *Microhierax* and among them were those of *Papilio caunus*, Westw., a mimic of *Euploea*. The observations suggested, as did Dr. V. G. L. van Someren's note in *Proc. Ent. Soc.*, 1923, p. lxi, that the birds referred to discriminated between the *Papilio* mimics and their Danaine or Euploeine models.

The Biology of Lycid beetles in Trinidad.—Dr. C. L. Withycombe said :—" Leguminous trees of the genus *Erythrina* are grown as shade for cacao in Tropical America, and of course elsewhere. When felled during the wet season the tissues outside the wood undergo fermentation in a series of stages, and the successive products of this fermentation attract a definite succession of insects.

" In the tissues referred to are groups of protein-containing cells. As products of enzyme action one gets first the breaking down of the proteins to various amino bodies, then to simpler nitrogenous compounds.

" In young vigorous trees the tissues are slightly acid (pH 6·2 approx.). With formation of ammoniacal products the reaction becomes alkaline (pH 8·2 to 8·6).

" The time taken by the tree to die varies with age, state of health, etc., and the rapidity and completeness of fermentation processes vary principally with moisture, as the temperature is more or less uniform. One may say that in about six weeks after felling the tree usually gives off a strong fishy odour, due to the presence of secondary and tertiary amines (primary amines were not detected). By this time the pH has risen to about 8·0. The fishy odour attracts *Calopteron fasciatum*, F. (Fam. Lycidae), which oviposits under the bark, the eggs being laid in groups. The larvae are coloured with yellow and black patches. They resemble Lampyrid larvae but have peculiar sucking mouth-parts, previously referred to in the *Transactions* of this Society (1924, p. 321). The larvae wander about singly on the tree-trunk and feed on the fermenting pulp under the bark by probing through holes and cracks. They do not live actually under the bark. When full-grown the larvae congregate in masses on the underside of the trunk for pupation. The position chosen is usually a darkened one. From a nucleus of early individuals a mass of several hundreds may radiate. The larval skin is not shed, but merely splits on either side along the anterior half to reveal the pupa. The pupal stage is short.

THE ENTOMOLOGICAL SOCIETY OF LONDON

THE FELLOWSHIP AND FEES.

Fellows pay an Admission Fee of £3 3*s*. The Annual Contribution of £2 2*s*. is due on the first day of January in each year, and is payable in advance.

All Fees should be paid to the Treasurer, Mr. W. G. Sheldon, at 41, Queen's Gate, S.W. 7, and *not to the Secretaries.*

Fellows desiring to pay their Annual Contribution through their bankers can obtain an official form of banker's order by applying to the Treasurer.

Fellows whose Contributions for the current year have been paid are entitled to receive the publications of the Society free of charge. Further copies may be purchased at reduced prices by applying to the Librarian.

Forms of application for Fellowship, copies of the Bye-laws and the List of Fellows may be obtained from the Secretaries.

MEETINGS AND EXHIBITIONS.

Intending exhibitors are required to send in their names and the nature of their exhibits to the Secretaries *before noon* on the day of the meeting, in order that they may be called upon from the chair. Descriptive notes of all exhibits should be handed to the Secretaries *at the same meeting* for printing in the Proceedings. If the lantern is required, a week's notice must be given.

Fellows resident abroad, or who are otherwise unable to attend, are reminded that any specimens, notes, or observations they may send to the Secretaries will be considered by the Council, with a view to exhibition or reading at the meetings of the Society.

PAPERS AND ILLUSTRATIONS.

Fellows desiring to communicate papers to the Society must send the manuscript of such papers to the Transactions Secretary, Mr. N. D. Riley, Brit. Mus. (Nat. Hist.), Cromwell Road, London, S.W. 7, at least fourteen days prior to the date of the meeting at which it is proposed that such papers shall be read. Authors desiring their papers to be published in the Transactions must submit the manuscript, and proposals for illustrations, if any, to the Transactions Secretary at least fourteen days before the meeting of the Publication Committee at which it is desired such papers should be considered.

Authors proposing to illustrate their papers should communicate with the Secretaries before the drawings are executed. The size of the finished work on plates should be limited to $7\frac{1}{2}$ ins. by $4\frac{3}{4}$ ins., after allowing for reduction, if any.

Attention is called to the Instructions to Authors issued with Part I of each volume, which may also be obtained at the Office of the Society. Inattention to these regulations may involve an author in considerable expense.

WANTED.

The Society is willing to purchase volumes or parts of the Transactions for the years 1907, 1908, and 1912.

MEETINGS

TO BE HELD IN THE SOCIETY'S ROOMS

41, QUEEN'S GATE, S.W. 7

SESSION 1926–1927.

1927.

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The Chair will be taken at Eight o'clock.

THE LIBRARY

is open to Fellows, and their friends when accompanying them, except during September, from 10 a.m. to 6 p.m., except on Saturdays, when it closes at 1 p.m. On the nights of meeting it remains open until 10 p.m.

NOTICE

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